

L Number	Hits	Search Text	DB	Time stamp
1	255	(514/255.06).CCLS.	USPAT; US-PGPUB	2003/09/05 12:18
2	154	(544/407).CCLS.	USPAT; US-PGPUB	2003/09/05 12:18
3	376	((514/255.06).CCLS.) ((544/407).CCLS.)	USPAT; US-PGPUB	2003/09/05 12:18
4	47	(((514/255.06).CCLS.) ((544/407).CCLS.)) AND ("sodium channel" OR mucos\$)	USPAT; US-PGPUB	2003/09/05 12:20
5	47	(((514/255.06).CCLS.) ((544/407).CCLS.)) AND ("sodium channel" OR mucos\$ OR "chloride channel")	USPAT; US-PGPUB	2003/09/05 12:20

[PubMed](#)[Nucleotide](#)[Protein](#)[Genome](#)[Structure](#)[PMC](#)[Taxonomy](#)[OMIM](#)[Bc](#)Search 

for

[Limits](#)[Preview/Index](#)[History](#)[Clipboard](#)[Details](#)[About Entrez](#)  Show:    [Text Version](#)☐ 1: Rev Esp Enferm Dig. 2000 Nov;92(11):738-47.[Related Articles, Lin](#)**Entrez PubMed**[Overview](#)[Help | FAQ](#)[Tutorial](#)[New/Noteworthy](#)[E-Utilities](#)**PubMed Services**[Journals Database](#)[MeSH Database](#)[Single Citation Matcher](#)[Batch Citation Matcher](#)[Clinical Queries](#)[LinkOut](#)[Cubby](#)**Related Resources**[Order Documents](#)[NLM Gateway](#)[TOXNET](#)[Consumer Health](#)[Clinical Alerts](#)[ClinicalTrials.gov](#)[PubMed Central](#)[Privacy Policy](#)**Effects of a tyrosine phosphatase inhibitor on chloride secretion in human intestinal epithelia.**[\[Article in English, Spanish\]](#)**Mayol J, Alarma-Estrany P, Adame Y, Alvarez Fernandez-Represa J.**

Surgery II Service, Hospital Universitario San Carlos, Universidad Complutense, Madrid, Spain. jmayol@hcsc.insalud.es

**AIMS:** Transcellular chloride transport is the key event underlying epithelial hydration in the intestine. Little is known about the role of protein tyrosine phosphatases in the regulation of basal and stimulated secretion in human intestinal epithelia. The aim of our study was to investigate the effects of the protein tyrosine phosphatase inhibitor sodium orthovanadate on vectorial chloride transport in native human colon. **METHODS:** An electrophysiological technique was used to measure changes in short-circuit current via a dual voltage/current clamp in native human colon mucosa and in T84 (ATCC) human intestinal cells mounted in modified Ussing chambers. **RESULTS:** Orthovanadate (1 mM) added to the serosal side of native human colon caused a net rise in short circuit current, reflecting the stimulation of serosal-to-mucosal chloride movement. Epithelial cells responded similarly to the same concentration of the compound. The stimulatory effect of orthovanadate was enhanced by pretreatment with the tyrosine kinase inhibitor genistein, but only when orthovanadate was added to the basolateral chamber. In contrast, the synergistic interaction did not occur when epithelial cells were previously exposed to the cAMP agonist forskolin. **CONCLUSIONS:** We show that tyrosine phosphatases may be involved in the regulation of epithelial chloride transport, and that orthovanadate stimulates secretion in the human colon.

PMID: 11468855 [PubMed - indexed for MEDLINE]

  Show:    [Write to the Help Desk](#)

10/076,551 Thomas McKenzie

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal61ltxm

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	Feb 24	PCTGEN now available on STN
NEWS	4	Feb 24	TEMA now available on STN
NEWS	5	Feb 26	NTIS now allows simultaneous left and right truncation
NEWS	6	Feb 26	PCTFULL now contains images
NEWS	7	Mar 04	SDI PACKAGE for monthly delivery of multifile SDI results
NEWS	8	Mar 24	PATDPAFULL now available on STN
NEWS	9	Mar 24	Additional information for trade-named substances without structures available in REGISTRY
NEWS	10	Apr 11	Display formats in DGENE enhanced
NEWS	11	Apr 14	MEDLINE Reload
NEWS	12	Apr 17	Polymer searching in REGISTRY enhanced
NEWS	13	AUG 22	Indexing from 1927 to 1936 added to records in CA/CAPLUS
NEWS	14	Apr 21	New current-awareness alert (SDI) frequency in WPIDS/WPINDEX/WPIX
NEWS	15	Apr 28	RDISCLOSURE now available on STN
NEWS	16	May 05	Pharmacokinetic information and systematic chemical names added to PHAR
NEWS	17	May 15	MEDLINE file segment of TOXCENTER reloaded
NEWS	18	May 15	Supporter information for ENCOMPPAT and ENCOMPLIT updated
NEWS	19	May 19	Simultaneous left and right truncation added to WSCA
NEWS	20	May 19	RAPRA enhanced with new search field, simultaneous left and right truncation
NEWS	21	Jun 06	Simultaneous left and right truncation added to CBNB
NEWS	22	Jun 06	PASCAL enhanced with additional data
NEWS	23	Jun 20	2003 edition of the FSTA Thesaurus is now available
NEWS	24	Jun 25	HSDB has been reloaded
NEWS	25	Jul 16	Data from 1960-1976 added to RDISCLOSURE
NEWS	26	Jul 21	Identification of STN records implemented
NEWS	27	Jul 21	Polymer class term count added to REGISTRY
NEWS	28	Jul 22	INPADOC: Basic index (/BI) enhanced; Simultaneous Left and Right Truncation available
NEWS	29	AUG 05	New pricing for EUROPATFULL and PCTFULL effective August 1, 2003
NEWS	30	AUG 13	Field Availability (/FA) field enhanced in BEILSTEIN
NEWS	31	AUG 15	PATDPAFULL: one FREE connect hour, per account, in September 2003
NEWS	32	AUG 15	PCTGEN: one FREE connect hour, per account, in September 2003
NEWS	33	AUG 15	RDISCLOSURE: one FREE connect hour, per account, in September 2003
NEWS	34	AUG 15	TEMA: one FREE connect hour, per account, in September 2003

10/076,551 Thomas McKenzie

NEWS 35 AUG 18 Data available for download as a PDF in RDISCLOSURE  
NEWS 36 AUG 18 Simultaneous left and right truncation added to PASCAL  
NEWS 37 AUG 18 FROSTI and KOSMET enhanced with Simultaneous Left and Right  
Truncation  
NEWS 38 AUG 18 Simultaneous left and right truncation added to ANABSTR  
  
NEWS EXPRESS April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT  
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),  
AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003  
NEWS HOURS STN Operating Hours Plus Help Desk Availability  
NEWS INTER General Internet Information  
NEWS LOGIN Welcome Banner and News Items  
NEWS PHONE Direct Dial and Telecommunication Network Access to STN  
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that  
specific topic.

All use of STN is subject to the provisions of the STN Customer  
agreement. Please note that this agreement limits use to scientific  
research. Use for software development or design or implementation  
of commercial gateways or other similar uses is prohibited and may  
result in loss of user privileges and other penalties.

\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 11:42:12 ON 05 SEP 2003

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 11:42:18 ON 05 SEP 2003

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2003 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 3 SEP 2003 HIGHEST RN 578696-90-9

DICTIONARY FILE UPDATES: 3 SEP 2003 HIGHEST RN 578696-90-9

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

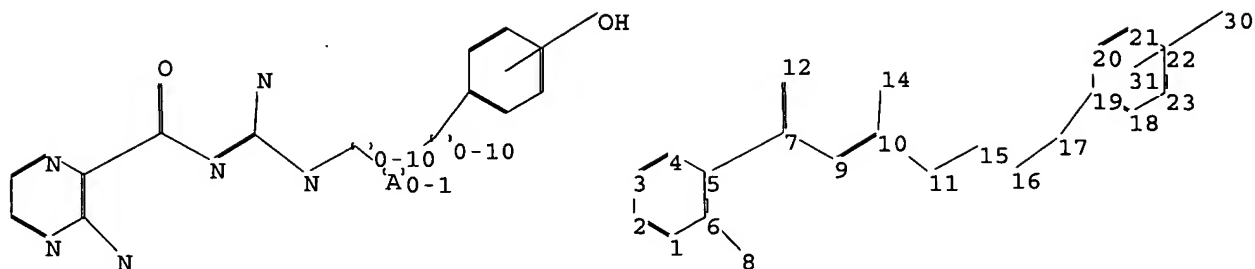
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP  
PROPERTIES for more information. See STNote 27, Searching Properties  
in the CAS Registry File, for complete details:

<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=>

Uploading C:\Program Files\Stnexp\Queries\10076551.str



```

chain nodes :
7 8 9 10 11 12 14 15 16 17 30
ring nodes :
1 2 3 4 5 6 18 19 20 21 22 23
chain bonds :
5-7 6-8 7-9 7-12 9-10 10-11 10-14 11-15 15-16 16-17 17-19
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 18-19 18-23 19-20 20-21 21-22 22-23
exact/norm bonds :
6-8 7-9 7-12 9-10 10-11 10-14 11-15 15-16 16-17
exact bonds :
5-7 17-19
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 18-19 18-23 19-20 20-21 21-22 22-23
isolated ring systems :
containing 1 :

```

Match level :

```

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS
11:CLASS 12:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:Atom 19:Atom
20:Atom 21:Atom 22:Atom 23:Atom 30:CLASS 31:CLASS

```

L1 STRUCTURE UPLOADED

=> s l1

SAMPLE SEARCH INITIATED 11:42:39 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 8 TO ITERATE

100.0% PROCESSED 8 ITERATIONS 0 ANSWERS  
SEARCH TIME: 00.00.01

```

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
                        BATCH **COMPLETE**
PROJECTED ITERATIONS: 8 TO 329
PROJECTED ANSWERS:    0 TO 0

```

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 11:42:47 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 240 TO ITERATE

10/076,551      Thomas McKenzie

100.0% PROCESSED      240 ITERATIONS  
SEARCH TIME: 00.00.01

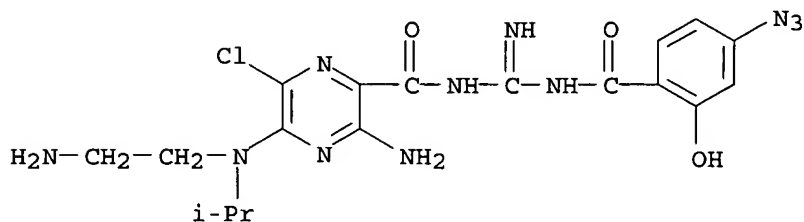
3 ANSWERS

L3                    3 SEA SSS FUL L1

=> d 1-3 ide cbib pi

10/076,551 Thomas McKenzie

L3 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 144176-48-7 REGISTRY  
CN Pyrazinecarboxamide, 3-amino-5-[(2-aminoethyl)(1-methylethyl)amino]-N-[[4-azido-2-hydroxybenzoyl]amino]iminomethyl]-6-chloro- (9CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C18 H22 Cl N11 O3  
SR CA  
LC STN Files: CA, CAPLUS, MEDLINE

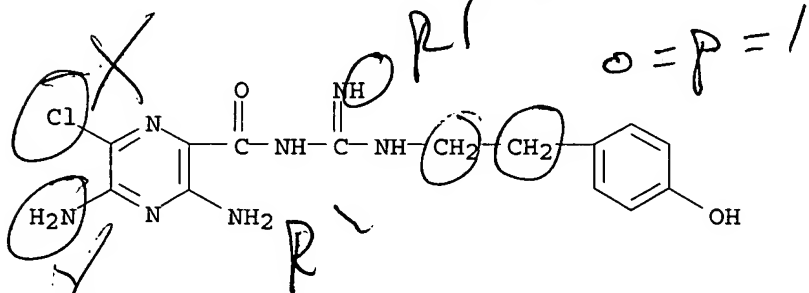


1 REFERENCES IN FILE CA (1937 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 117:205669 Novel amiloride analog allosterically modulates the  $\alpha$ 2-adrenergic receptor but does not inhibit sodium/hydrogen ion exchange. Wilson, Amy L.; Womble, Scott N.; Prakash, Chandra; Cragoe, E. J., Jr.; Blair, Ian A.; Limbird, Lee E. (Sch. Med., Vanderbilt Univ., Nashville, TN, 37332-6600, USA). Molecular Pharmacology, 42(2), 175-9 (English) 1992. CODEN: MOPMA3. ISSN: 0026-895X.

10/076,551 Thomas McKenzie

L3 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 134788-24-2 REGISTRY  
CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[[[2-(4-  
hydroxyphenyl)ethyl]amino]iminomethyl]- (9CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C14 H16 Cl N7 O2  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

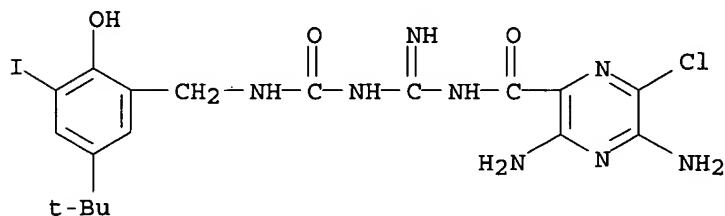
1 REFERENCES IN FILE CA (1937 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 115:41425 Reversal of intrinsic multidrug resistance in Chinese hamster ovary cells by amiloride analogs. Epand, R. F.; Epand, R. M.; Gupta, R. S.; Cragoe, E. J., Jr. (Health Sci. Cent., McMaster Univ., Hamilton, ON, L8N 3Z5, Can.). British Journal of Cancer, 63(2), 247-51 (English) 1991. CODEN: BJCAAI. ISSN: 0007-0920.

1-11  
14-17  
18 21-23

27  
28  
30

L3 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 64077-96-9 REGISTRY  
 CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[[[[[5-(1,1-dimethylethyl)-2-hydroxy-3-iodophenyl]methyl]amino]carbonyl]amino]iminomethyl]- (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C18 H22 Cl I N8 O3  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL  
 (\*File contains numerically searchable property data)



2 REFERENCES IN FILE CA (1937 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 89:109585 Pyrazinecarboxamides. Cragoe, Edward J., Jr.; Woltersdorf, Otto W., Jr.; Habecker, Charles N. (Merck and Co., Inc., USA). U.S. US 4085211 19780418, 15 pp. (English). CODEN: USXXAM. APPLICATION: US 1976-722442 19760913.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4085211	A	19780418	US 1976-722442	19760913
	DK 7605314	A	19770616	DK 1976-5314	19761125
	SE 7613289	A	19770616	SE 1976-13289	19761126
	SE 431452	B	19840206		
	SE 431452	C	19840517		
	NL 7613276	A	19770617	NL 1976-13276	19761129
	AU 7620181	A1	19780608	AU 1976-20181	19761202
	AU 511429	B2	19800821		
	ES 454160	A1	19780301	ES 1976-454160	19761210
	FR 2335226	A1	19770715	FR 1976-37459	19761213
	FR 2335226	B1	19790309		
	GB 1527297	A	19781004	GB 1976-51940	19761213
	HU 175504	P	19800828	HU 1976-ME2034	19761213
	CH 630369	A	19820615	CH 1976-15660	19761213
	BE 849379	A1	19770614	BE 1976-173235	19761214
	ZA 7607431	A	19780726	ZA 1976-7431	19761214
	JP 52106877	A2	19770907	JP 1976-149889	19761215
	JP 62038350	B4	19870817		
	ES 465742	A1	19781001	ES 1978-465742	19780103

REFERENCE 2: 87:117906 Pyrazinecarboxamides. Cragoe, Edward Jethro, Jr.; Woltersdorf, Otto William, Jr.; Habecker, Charles Newcomer (Merck and Co., Inc., USA). Ger. Offen. DE 2656374 19770616, 71 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1976-2656374 19761213.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2656374	A1	19770616	DE 1976-2656374	19761213
	DE 2656374	C2	19890810		
	DK 7605314	A	19770616	DK 1976-5314	19761125
	SE 7613289	A	19770616	SE 1976-13289	19761126

10/076,551      Thomas McKenzie

SE 431452	B	19840206		
SE 431452	C	19840517		
NL 7613276	A	19770617	NL 1976-13276	19761129
AU 7620181	A1	19780608	AU 1976-20181	19761202
AU 511429	B2	19800821		
ES 454160	A1	19780301	ES 1976-454160	19761210
FR 2335226	A1	19770715	FR 1976-37459	19761213
FR 2335226	B1	19790309		
GB 1527297	A	19781004	GB 1976-51940	19761213
HU 175504	P	19800828	HU 1976-ME2034	19761213
CH 630369	A	19820615	CH 1976-15660	19761213
BE 849379	A1	19770614	BE 1976-173235	19761214
ZA 7607431	A	19780726	ZA 1976-7431	19761214
JP 52106877	A2	19770907	JP 1976-149889	19761215
JP 62038350	B4	19870817		
ES 465742	A1	19781001	ES 1978-465742	19780103

10/076,551      Thomas McKenzie

=>

=> logoff

ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF

LOGOFF? (Y)/N/HOLD:.

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

158.47

158.68

STN INTERNATIONAL LOGOFF AT 11:46:27 ON 05 SEP 2003